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SUCCESS STORY

Malls and Resorts Replicate USAID-Developed Wastewater Treatment System

USAID has helped bring innovative wastewater treatment technology to malls, resorts and public markets throughout the Philippines



Dave Robbins/ECO-Asia

Engineer Carlito Santos, Jr. in the control room of the sewage treatment plant at SM Mall North EDSA

With the opening of the Mall of Asia in Metro Manila, SM Prime Holdings, Inc. boasts the largest mall in Asia. What this mall and many of SM's other malls in the Philippines have in common is the use of state-of-the-art wastewater treatment and recycling systems designed by Carlito Santos, Jr., a consultant for USAID's Local Initiatives for Affordable Wastewater Treatment (LINAW) Project. The treatment system is based on sequencing batch reactor (SBR) technology, which takes up less space and uses less energy than conventional systems. It works by utilizing one tank for the separate steps in the wastewater treatment process, which in conventional treatment plants requires separate tanks. Additionally, SBR requires only intermittent use of the air blowers instead of having them run continuously, which saves electricity and money. The efficiency has been further enhanced with fine bubble diffusers, which are more effective at transferring oxygen to the water than more common bubble diffusers.

Because of its cost-effectiveness and practical local application, USAID's LINAW Project introduced SBR into public markets and slaughterhouses across the Philippines. For these facilities, SBR is used in conjunction with a series of septic tanks that remove most of the pollution from the water so the treated water can be reused. The Muntinlupa City Public Market, for example, is the first public market in the Philippines to reuse its treated effluent for toilet flushing and street washing. LINAW has also promoted the replication of SBR in high-end resorts, including Plantation Bay in Cebu and El Nido in Palawan. According to Engineer Santos, resorts, public markets and SM malls are all saving 30-40% in operation costs with the new treatment system and are beginning to see the wastewater itself as a potential resource.

"Even highly commercial establishments want to save on energy, that's why they're converting to this system which is more efficient and less costly to operate."

- Engineer Carlito Santos, Jr. of USAID's LINAW Project

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